

Additional file 3: Demographics of the included articles

| Citizens with an ethnic minority background (n=13) | | | | | |
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| Reference | Country | Aim | Study approach | Study method | Citizens involved |
| Alcazar et al. (2017) [2] | USA | To explore the impact of the Brighter Bites programme from the perspective of low-income Spanish families using photovoice. | CBPR | Photovoice | Parents of low-income Spanish-speaking families |
| Belone et al. (2016) [7] | USA | To improve the conceptual CBPR model. | CBPR | Focus groups | African American, American Indian, Asian, Latino, and White |
| Ceballos et al. (2015) [20] | USA | To describe the development of a culturally appropriate support group and to report on the feasibility of implementation and preliminary outcomes. | Mixed method study | Focus groups, interviews, questionnaires | Bilingual/bicultural Latinos |
| DeCamp et al. (2015) [27] | USA | To describe the process of establishing a family advisory board composed of Latino families at a paediatric primary care clinic, with a focus on initial partnership development and the experiences of family members on the board. | Multimodal evaluation of advisory board | Observations, member check-ins, group reflection session, and semi-structured interviews | Low-income Latino families with limited English proficiency |
| De Marco et al. (2014) [26] | USA | To describe the process of establishing a relationship between a research university and a Black church in rural North Carolina. | CBPR | Gardening | Visitors to a Black church |
| Haynes-Maslow et al. (2014) [40] | USA | To explore why African American women have low enrolment rates in clinical trials. | Qualitative research approach | Focus groups | African Americans |

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| Irvine et al. (2017) [41] | UK | To listen to people with Chinese backgrounds about their experiences of personalization. | Phenomenology | Semi-structured interviews and focus groups | UK residents with a Chinese background |
| Isler et al. (2015) [42] | USA | To describe a CBPR approach with Black youths aged 18 to 30. | CBPR | Research Literacy Workgroup group discussions on a regular basis | Black Americans |
| Knifton (2012) [44] | Scotland | To explore mental health stigma with the three largest ethnic minority communities (Pakistani, Chinese and Indian ethnic minority) groups in Scotland. | CBPR | Focus groups | Minority communities with a Pakistani, Chinese, or Indian heritage |
| Lee et al. (2016) [47] | USA | To design a pilot intervention and develop the leadership capacity of grassroots community members based on their own experiences with behavioural health issues. | CBPR | Biweekly meetings in which creative methods are used | Cambodian American women, Cambodian-born refugees, American-born children of refugees, immigrants from Cambodia |
| McDavitt et al. (2016) [54] | USA | To identify strategies for facilitating two-way dialogue and the development of trust with communities to gain a better understanding of the findings and to explore the implications of culturally relevant interventions and public policy. | CBPR | Participatory observations and evaluation meetings with community advisory board | Black men and women living with HIV |
| Redwood et al. (2012) [65] | UK | To explore the intersections of faith, culture, health, and food to generate evidence for addressing cultural difference in the design and provision of health services. | Qualitative research approach | Rangoli workshop | South Asian women |
| Wang-Letzkus et al. (2012) [82] | USA | To share culturally competent strategies and lessons learned from a | CBPR | Focus groups, questionnaires, | Chinese American elderly people |

| | | study that used a CBPR approach with elderly diabetic Chinese Americans. | | meetings, and presentations with CAB | |
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| Citizens who are insecurely housed (n=2) | | | | | |
| Reference | Country | | Study approach | Study method | Citizens involved |
| Van Draanen et al. (2013) [79] | Canada | To investigate the factors that facilitated the meaningful inclusion of Caucus members in research and service planning from the perspectives of Caucus members and project stakeholders. | Qualitative research approach | Document review, interviews, focus groups | Caucasian members, people with lived experience of homelessness and/or mental health issues |
| Pakhale et al. (2016) [61] | USA | To describe the processes utilized in citizen or patient engagement research through a tobacco dependence management project with the inner-city population in Ottawa, Canada. | CBPR | Weekly meetings with peer researchers | Community members with current or past experience of drug use, current or ex-tobacco smokers who are/were homeless or insecurely housed |
| Citizens with a migration status (n=13) | | | | | |
| Reference | Country | | Study approach | Study method | Citizens involved |
| Alzubaidi and Marriott (2014) [3] | Australia | To investigate Arabic-speaking immigrants' views and beliefs about diabetes, the use of medicines, health care-seeking behaviours, and their needs and preferences. | PPI | Interviews and semi-structured interviews | Arabic-speaking immigrants |
| Alzubaidi et al. (2017) [4] | Australia | To explore preferences among Arabic-speaking migrants with type 2 diabetes in Melbourne, Australia. | PPI | Interviews and semi-structured interviews | Arabic-speaking immigrants |
| Brugge et al. (2010) [17] | USA | To compare three case examples of CBPR that differ in terms of community and involvement. | Qualitative comparative analyses | Secondary document analysis | (1) Chinese immigrants living in or attending school or clinics in Boston's Chinatown, (2) Public housing residents, including immigrant residents, (3) |

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| | | | | | community members of Boston's Chinatown |
| Cyril et al. (2017) [23] | Australia | To explore the barriers to and facilitators of the participation of culturally and linguistically diverse communities in the existing obesity prevention services in Victoria, Australia. | Qualitative research approach | Nominal group technique | Vietnamese, Burmese, African, Afghani, and Indian Australians living in disadvantaged areas |
| De Freitas and Martin (2015) [25] | The Netherlands | To examine the factors that influence minority service-users' decisions to get involved and stay engaged through a study of a successful mental health advocacy project hosted by a Dutch user organization. | Qualitative research approach | Interviews, observations, document analysis | Cape Verdean migrants |
| Dingoyan et al. (2012) [30] | Germany | To provide information about attitudes towards health research studies as well as to identify potential barriers to and solutions for the successful recruitment of individuals with Turkish migration backgrounds into health research studies. | Qualitative research approach | Focus groups | German residents with a Turkish migration background |
| Loignon et al. (2018) [48] | Canada | To support knowledge co-construction and translation with respect to frontline care and services by engaging underserved or Aboriginal people with low literacy skills in the research. | Participatory research | Meetings | People who are illiterate people, immigrants who have difficulty expressing themselves in French or English, and people with multi-morbidities |
| Lionis et al. (2016) [49] | Several European countries | To explore whether the available guidelines and training on communication regarding cross-cultural care initiatives make sense to migrants and other key stakeholders. | PLA | Focus groups | Migrants using local primary care services |

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| O'Reilly-De Brún et al. (2015) [59] | Ireland | To reflect on the use of formal versus informal interpreters in PLA studies. | PLA | PLA-style focus groups | Migrant service users with limited English proficiency |
| O'Reilly-De Brún et al. (2016) [60] | Ireland | To describe PLA methodology, the mode of engagement, and techniques used for enhancing migrants' access to and engagement in the research process, and to report their evaluation of engagement. | PLA | PLA-style focus groups | Immigrants from Russia, Nigeria, Poland, Pakistan, Democratic Republic of the Congo, Portugal, Nigeria |
| Renzaho (2017) [66] | Australia | To develop a community engagement framework to improve childhood obesity prevention among migrants. | CBPR | African Review Panel (ARP) | Culturally and linguistically diverse migrant communities |
| Shirazi et al. (2013) [71] | USA | To determine the knowledge, attitudes towards, and sources of information regarding breast health care and to identify specific religious and/or social barriers for Muslim Afghan women immigrants to seeking care. | CBPR | Interviews | Immigrant Muslim Afghan women |
| Woodward-Kron et al. (2016) [84] | Australia | To explore: i) the perceptions and experiences of the medical system and medical research of CALD patients; ii) the views of research professionals on CALD patient participation in medical research; and iii) to inform the development of a multimedia resource for medical research and clinical trials. | Qualitative research approach | Interviews and focus groups | Older Italian migrants |
| Citizens with a low socioeconomic position (n=2) | | | | | |
| Reference | Country | | Study approach | Study method | Citizens involved |

| Marinescu et al. (2013) [52] | USA | To describe how CBPR methods are used for developing and evaluating the Be Active Together intervention. | CBPR | Meetings and focus groups | Low-income Somali-, Vietnamese-, Khmer-, and English-speaking residents |
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| Stewart (2015) [75] | Scotland | To understand the perspectives of young adults on local practices of public involvement in a socioeconomically deprived area of Scotland. | Qualitative research approach | Interviews | Young adults (18–25 years old) living in a socioeconomically deprived area of Scotland |
| Citizens living in diverse vulnerable circumstances, diverse (n=6) | | | | | |
| Reference | Country | | Study approach | Study method | Citizens involved |
| Kaiser et al. (2017) (2016) [43] | USA | To describe the origins, participants, processes, and outcomes of a community advisory board comprised solely of lay stakeholders that brings the voices of rarely heard groups into the research enterprise. | Evaluation | | People with challenging life experiences, including poverty, homelessness, long-term underemployment, and chronic health problems |
| MacFarlane et al. (2017) [51] | Ireland and USA | To analyse the use of World Cafés as a participatory method for research prioritization with marginalized communities in Ireland and the USA. | Comparative analysis of two cases | Observations and World Cafés | Ireland: English-speaking migrants, Irish Travellers, women who had experienced domestic violence, people with disabilities, and people living in poverty. USA: Bhutanese Chinese and Karen refugees and Latin American immigrants |
| Montesanti et al. (2016) [57] | Canada | To better understand how health service organizations carry out participation initiatives with marginalized populations. | Qualitative comparative analyses of four cases | Key informant interviews with community health workers and secondary document analyses | (1) Low-German speaking Mennonite farming populations, (2) newcomers and immigrants, (3) elderly immigrant francophones', and (4) women who are refugees |
| O'Donnell et al. (2016) [58] | Ireland | To involve members of marginalized groups in the development of local | PLA | PLA-style focus groups | Migrants, homeless people, Irish Travellers, drug users, sex |

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| | | primary care services in Ireland by incorporating their views about priority areas for action. | | | workers, young mothers from deprived areas |
| Ryan et al. (2017) [68] | UK | To explore whether there are core components of good care that apply across different populations and conditions. | Qualitative research approach | Focus groups | Migrant workers, Irish Travellers, young men, illegal drug users, people with long-term health conditions, learning-disabled people, and elderly who meet for educational and cultural activities through the University of the Third Age |
| Snow et al. (2018) [72] | Canada | To develop a heuristic model to assist planners to engage patients who are not traditionally included in health-care planning. | Qualitative research approach | Literature review, interviews, focus groups | Women who were pregnant and/or new parenting mothers affected by substance use and/or violence; new immigrants to Canada; and Indigenous people who had a history of incarceration |
| Refugees (n=4) | | | | | |
| Reference | Country | | Study approach | Study method | Citizens involved |
| Hayley et al. (2013) [39] | USA | To describe the process used and results derived from implementing the university/WRAP collaborative adaptation of the Eat Walk Sleep healthy living curricular tool. | Community-engaged approach | Meetings, qualitative pilot sessions, pilot workshops | Community advisors from four ethnic groups from Burma: Karen, Karenni, Kacin, and Chinese |
| Martzoukou and Burnett (2018) [32] | Scotland | To explore the nature of information provided to Syrian refugees and the emerging information needs and barriers they experienced during their initial phase of resettlement and adaptation in a new sociocultural environment. | Qualitative research approach | Interviews and focus groups | Syrian new to Scotland |

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| Riggs et al. (2015) [67] | Australia | (1) To report on the steps that were taken in developing the Having a Baby in a New Country project; (2) to describe the challenges and ethical dilemmas associated with implementing community and health service engagement strategies; and (3) to reflect on lessons learned from the study. | CBPR | Community researchers: meetings, training; Community advisory group: meetings; Community: focus groups and interviews | Afghan women and men |
| Quinn (2013) [63] | Scotland | To investigate the different beliefs regarding and attitudes to mental health problems among the asylum seeker and refugee population in Glasgow. | PAR | Focus groups | Asylum seekers from a range of countries including Somalia, Eritrea, Pakistan, Iran, Iraq, China, and Sri Lanka |

Notes: CBO = community-based organization, CBPR = community-based participatory research, PPI = public and patient involvement, PLA = participatory learning in action, PAR = participatory action research

